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"Providing Tomorrow's Analytical Capabilities Today"

Certificate of Analysis 5101822

Mark Peacock
Duke Energy - Edwardsport IGCC
15424 State Road 358
Edwardsport IN, 47528

Customer ID: DU2303
Report Printed: 10/12/2015 14:04

Project Name: Grey Water Process Control

Workorder: 5101822

Dear Mark Peacock

Enclosed are the analytical results for samples received at one of our laboratories on 10/06/2015 14:10.

McCoy & McCoy Laboratories, Inc. and Environmental Certification Labs are commercial laboratories accredited by various state and national authorities, including Indiana, Kentucky, Tennessee, and Virginia's National Environmental Laboratory Accreditation Program (NELAP). With the NELAP accreditation, applicable test results are certified to meet the requirements of the National Environmental Laboratory Accreditation Program.

If you have any questions concerning this report please contact the individual listed below.

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#460210
Madisonville

Doug Wolfe

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Doug Wolfe For Syd Tate, Data Reviewer



SAMPLE SUMMARY

| Lab ID | Client Sample ID/Alias | Matrix | Date Collected | Date Received | Sampled By |
|------------|-----------------------------------|------------|------------------|------------------|-------------|
| 5101822-01 | Filtered Water/20151006-032 | Wastewater | 10/06/2015 09:45 | 10/06/2015 14:10 | Diana Reedy |
| 5101822-02 | Greywater Influent/20151006-033 | Wastewater | 10/06/2015 09:55 | 10/06/2015 14:10 | Diana Reedy |
| 5101822-03 | Greywater In Process/20151006-034 | Wastewater | 10/06/2015 09:50 | 10/06/2015 14:10 | Diana Reedy |

ANALYTICAL RESULTS

Lab Sample ID: **5101822-01**

Description: **Filtered Water 20151006-032**

Sample Collection Date Time: 10/06/2015 09:45

Sample Received Date Time: 10/06/2015 14:10

Conventional Chemistry Analyses Farmersburg

| Analyte | Result | Flag | Units | MRL | MDL | Method | Prepared | Analyzed | Analyst |
|------------------------|--------|------|-------|------|------|-------------|------------------|------------------|---------|
| Total Dissolved Solids | 340 | | mg/L | 10.0 | 10.0 | 2540 C-1997 | 10/08/2015 15:01 | 10/09/2015 13:30 | dsb |

ANALYTICAL RESULTS

Lab Sample ID: **5101822-02**

Description: **Greywater Influent 20151006-033**

Sample Collection Date Time: 10/06/2015 09:55

Sample Received Date Time: 10/06/2015 14:10

Conventional Chemistry Analyses Farmersburg

| Analyte | Result | Flag | Units | MRL | MDL | Method | Prepared | Analyzed | Analyst |
|------------------------|--------|------|-------|------|------|-------------|------------------|------------------|---------|
| Total Dissolved Solids | 2680 | | mg/L | 10.0 | 10.0 | 2540 C-1997 | 10/08/2015 15:01 | 10/09/2015 13:30 | dsb |

ANALYTICAL RESULTS

Lab Sample ID: **5101822-03**

Description: **Greywater In Process 20151006-034**

Sample Collection Date Time: 10/06/2015 09:50

Sample Received Date Time: 10/06/2015 14:10

Conventional Chemistry Analyses Farmersburg

| Analyte | Result | Flag | Units | MRL | MDL | Method | Prepared | Analyzed | Analyst |
|------------------------|--------|------|-------|------|------|-------------|------------------|------------------|---------|
| Total Dissolved Solids | 20.0 | | mg/L | 10.0 | 10.0 | 2540 C-1997 | 10/08/2015 15:01 | 10/09/2015 13:30 | dsb |



Notes for work order 5101822

- Samples collected by MMLI personnel are done so in accordance with procedures set forth in MMLI field services SOPs.
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.

Standard Qualifiers/Acronyms

| | |
|-------|-----------------------------|
| MDL | Method Detection Limit |
| MRL | Minimum Reporting Limit |
| ND | Not Detected |
| LCS | Laboratory Control Sample |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| DUP | Sample Duplicate |
| % Rec | Percent Recovery |
| RPD | Relative Percent Difference |
| > | Greater than |
| < | Less than |

Sample Acceptance Checklist for Work Order 5101822

Shipped By: MMLI

Temperature: 6.00° Celcius

Condition

| | |
|--|-------------------------------------|
| Custody seals present/intact? | <input type="checkbox"/> |
| Were any containers received damaged? | <input type="checkbox"/> |
| COC submitted and complete? | <input checked="" type="checkbox"/> |
| COC agree with sample labels? | <input checked="" type="checkbox"/> |
| All containers listed on COC received? | <input checked="" type="checkbox"/> |
| Were all samples in appropriate containers? | <input checked="" type="checkbox"/> |
| Did all samples have appropriate volumes? | <input checked="" type="checkbox"/> |
| Were collection methods recorded on COC? | <input type="checkbox"/> |
| Were flow units recorded on COC? | <input type="checkbox"/> |
| Any headspace issues with volatile samples? | <input type="checkbox"/> |
| Were all holding times acceptable? | <input checked="" type="checkbox"/> |
| Were preserved samples within acceptable pH range? | <input type="checkbox"/> |
| Were preserved samples within acceptable Cl2 range | <input type="checkbox"/> |



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11422 N US Hwy 41 Farmersburg, IN 47850 812-696-5076

CHAIN OF CUSTODY

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| | | | |
|---|---|---|---|
| Client: <u>DUKE ENERGY-EDWARDSPORT</u> <u>IGCC</u> | Bill To: <u>DUKE ENERGY-EDWARDSPORT IGCC</u> <u>MAIL DROP WPG41</u> <u>1000 E. MAIN ST.</u> <u>PLAINFIELD IN 46168</u> | Customer PO# | Sample Chlorinated YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> (check one) |
| Project Name: <u>GREY WATER PROCESS CONTROL</u> | | Sample Collector (Signature): <u>Diana Reedy</u> | Compliance Sample YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> (check one) |
| | | Sample receipt information is electronically recorded | Workorder No.: <u>5101822</u> |

| Collection | | | | | | | Sample Description | Analysis Requested | Sample No. MMLI Use Only |
|------------|---------|------|--------|--------------|--------------|----------------|---------------------------------------|--------------------|-----------------------------|
| No. | Date | Time | Matrix | Preservative | # of Bottles | Grab Composite | | | |
| 1 | 10-6-15 | 0945 | | | 1 | | 20151006-032 FILTERED WATER | TDS Fmb | -01 |
| 2 | 10-6-15 | 0955 | | | 1 | | 20151006-033 GREY WATER INFLUENT | TDS Fmb | -02 |
| 3 | 10-6-15 | 0950 | | | 1 | | 20151006-034 GREY WATER IN PROCESS | TDS Fmb | -03 |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |

Comments:

| Relinquished By: <u>Diana Reedy</u> | Date: <u>10-6-15</u> | Time: <u>10:00</u> | Code Chart <table><tr><th>Matrix</th><th>Preservation</th></tr><tr><td>DW - Drinking Water</td><td>NI - Nitric Acid (HNO3)</td></tr><tr><td>SW - Solid Waste</td><td>HA - Hydrochloric Acid (HCL)</td></tr><tr><td>SO - Soil/Solid</td><td>SH - Sodium Hydroxide (NaOH)</td></tr><tr><td>OL - Oil</td><td>ST - Sodium Thiosulfate</td></tr><tr><td>SL - Sludge</td><td>ZN - Zinc Acetate</td></tr><tr><td>GW - Groundwater</td><td>SA - Sulfuric Acid (H2SO4)</td></tr><tr><td>WW - Wastewater</td><td>AA - Absorbic Acid</td></tr><tr><td>SU - Surface water</td><td>4C - 4 degree Celcius</td></tr><tr><td></td><td>NO - None</td></tr></table> | Matrix | Preservation | DW - Drinking Water | NI - Nitric Acid (HNO3) | SW - Solid Waste | HA - Hydrochloric Acid (HCL) | SO - Soil/Solid | SH - Sodium Hydroxide (NaOH) | OL - Oil | ST - Sodium Thiosulfate | SL - Sludge | ZN - Zinc Acetate | GW - Groundwater | SA - Sulfuric Acid (H2SO4) | WW - Wastewater | AA - Absorbic Acid | SU - Surface water | 4C - 4 degree Celcius | | NO - None |
|-------------------------------------|------------------------------|--------------------|--|--------|--------------|---------------------|-------------------------|------------------|------------------------------|-----------------|------------------------------|----------|-------------------------|-------------|-------------------|------------------|----------------------------|-----------------|--------------------|--------------------|-----------------------|--|-----------|
| Matrix | Preservation | | | | | | | | | | | | | | | | | | | | | | |
| DW - Drinking Water | NI - Nitric Acid (HNO3) | | | | | | | | | | | | | | | | | | | | | | |
| SW - Solid Waste | HA - Hydrochloric Acid (HCL) | | | | | | | | | | | | | | | | | | | | | | |
| SO - Soil/Solid | SH - Sodium Hydroxide (NaOH) | | | | | | | | | | | | | | | | | | | | | | |
| OL - Oil | ST - Sodium Thiosulfate | | | | | | | | | | | | | | | | | | | | | | |
| SL - Sludge | ZN - Zinc Acetate | | | | | | | | | | | | | | | | | | | | | | |
| GW - Groundwater | SA - Sulfuric Acid (H2SO4) | | | | | | | | | | | | | | | | | | | | | | |
| WW - Wastewater | AA - Absorbic Acid | | | | | | | | | | | | | | | | | | | | | | |
| SU - Surface water | 4C - 4 degree Celcius | | | | | | | | | | | | | | | | | | | | | | |
| | NO - None | | | | | | | | | | | | | | | | | | | | | | |
| Received By: <u>Adam Hines</u> | Date: <u>10-6-15</u> | Time: <u>11:08</u> | | | | | | | | | | | | | | | | | | | | | |
| Relinquished By: <u>Adam Hines</u> | Date: <u>10-6-15</u> | Time: <u>14:10</u> | 1. Expedited TAT not available for all testing, please call. 2. RUSH fees may apply if samples received with <48 hr hold time remaining. 3. MMLI reserves the right to return unused sample. | | | | | | | | | | | | | | | | | | | | |
| Received By: <u>Adam Hines</u> | Date: <u>10-6-15</u> | Time: <u>14:10</u> | | | | | | | | | | | | | | | | | | | | | |
| Relinquished By: | Date: | Time: | | | | | | | | | | | | | | | | | | | | | |
| Received By: | Date: | Time: | | | | | | | | | | | | | | | | | | | | | |